

**REMARKS**

This is in response to the Office Action issued on December 17, 2002. By this response, claims 1, 4 and 18 are amended, and claims 23 and 24 are newly added. Adequate descriptive support for the amendment can be found in the specification. Claims 1-24 are now active for examination. No new matter is introduced.

The Office Action allowed claims 16 and 17, and rejected claims 1, 3, 4, 9, 10 and 18 under 35 U.S.C. §102(b) as being anticipated by a newly cited reference, UK Patent Application No. GB2073464 (the UK patent application); claim 2 under 35 U.S.C. §103(a) as being unpatentable over the UK patent application in view of Sievers et al. (U.S. Patent No. 4,379,990); and claims 11-15 under 35 U.S.C. 103(a) as being unpatentable the UK patent application in view of Bertness (U.S. Patent No. 6,331,762). The Office Action also objected to claims 5-8 and 19-22 for depending on a rejected claim, but indicated that the claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

The rejections and objection are respectfully traversed in light of the amendment and remarks presented herein.

**THE ANTICIPATION REJECTION OF CLAIMS 1, 3, 4 AND 18 IS TRAVERSED**

Claims 1, 3, 4, 9, 10 and 18 were rejected as being anticipated over the UK patent application. The rejection is respectfully traversed because the reference does not support a prima facie case of anticipation.

A *prima facie* case of anticipation under 35 U.S.C. § 102 requires that a single prior art reference must disclose each and every element as set forth in the subject claim. *Verdegaal*

*Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

"The identical invention must be shown in as complete detail as is contained in the ... claim."

*Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The cited reference, however, fails to disclose every limitation of the claims.

Claim 1, as amended, recites:

1. A method for evaluating operation of an alternator comprising:
  - detecting a frequency component of an alternator output signal representative of a rectified output of the alternator;
  - comparing the frequency component of the alternator output signal with a threshold frequency; and
  - evaluating operation of the alternator based on a result of the comparing step.

Claims 4 and 18, as amended, also include limitations related to processing of an alternator output signal representative of a rectified output of the alternator.

The Examiner cited the UK patent application to support the anticipation rejection. The UK patent application is related to a control system for an engine-driven alternator that detects and displays an alternator frequency. The system also compares the detected frequency with a preset frequency. If the detected frequency is lower than the preset frequency, the system generates a warning signal.

The UK patent application, however, does not teach determining the health of the alternator based on a frequency component of an alternator output signal representative of a rectified output of the alternator, as required by the claims. Since the reference fails to disclose every limitation of the claims, the reference cannot support a prima facie case of anticipation. The anticipation rejection is thus untenable and should be withdrawn.

Claim 3, 9 and 10 depend on claims 1 and 4 respectively, and incorporate every limitation thereof. Thus, the UK patent application also fails to teach every limitation of the

claims based on the same reasons as discussed in claims 1 and 4, as well as on their own merits. The anticipation rejection is hence untenable and should be withdrawn. Favorable consideration of the claims is respectfully requested.

**THE OBVIOUSNESS REJECTIONS OF CLAIMS 2 AND 11-15 IS TRAVERSED**

Claim 2 was rejected as being unpatentable over the UK patent application in view of Sievers, and claims 11-15 were rejected as being unpatentable the UK patent application in view of Bertness. The rejections are respectfully traversed because the cited references, even combined, cannot support a prima facie case of obviousness.

A *prima facie* case of obviousness under 35 U.S.C. § 103 requires three criteria be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation in the references themselves to modify the reference or to combine reference teachings. Third, there must be a reasonable expectation of success for the modification or combination of references. Further, the teaching or suggestion to make the modification or combination of prior art and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The teachings, motivations or suggestions to combine references must be based on objective evidence of record and cannot be resolved on subjective belief and unknown authority. *In re Lee*, Federal Circuit Case No. 00-1158 (January 18, 2002). Additionally, there must be particular finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge to the claimed invention to combine or modify references. *In*

*re Kotzab*, 217 F.3d 1365, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). The references, however, do not meet these requirements.

Claims 2 and 11-15, directly or indirectly, depend on claims 1 and 4 respectively. As discussed earlier, the UK patent application does not teach processing of a rectified alternator output signal as required by claims 1 and 4. Neither Sievers nor Bertness alleviates this deficiency. Therefore, the references, even combined, do not disclose every limitation of the claims. The obviousness rejection of the claims are thus untenable and should be withdrawn based on at least the same reasons discussed in claims 1 and 4, as well as on their own merits. Favorable consideration of the claims is respectfully requested.

**THE OBJECTION OF CLAIMS 5-8 AND 19-22 IS ADDRESSED**

Claims 5-8 and 19-22 were objected to for depending on rejected claims, i.e., claims 1 or 18, but would be allowable if rewritten in independent forms. As discussed above, claims 1 and 18 are patentable over the cited references. Thus, claims 5-8 and 19-22 are also patentable based on the same reasons discussed in claims 1 and 18, as well as on their own merits. Favorable consideration of the claims is respectfully requested.

**NEW CLAIMS 23 AND 24 ARE PATENTABLE**

New claims 23 and 24 are means-plus-function claims having limitations comparable to those of claims 16 and 17, which were already allowed. Therefore, the new claims are also allowable based on the same reasons for claims 16 and 17, as well as on their own merits.

**CONCLUSION**

Therefore, the present application claims subject matter patentable over the references of record and is in condition for allowance. Favorable consideration is respectfully requested. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Recognition Under 37 C.F.R. §10.9(b)

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**VERSION WITH MARKINGS SHOWING CHANGES MADE**

**IN THE CLAIMS:**

Please amend the claims 1, 4 and 18 as follows:

1. (Amended) A method for evaluating operation of an alternator comprising:  
detecting a frequency component of an alternator output signal representative of a rectified output of the alternator;  
comparing the frequency component of the alternator output signal with a threshold frequency; and  
evaluating operation of the alternator based on a result of the comparing step.
4. (Amended) A system for evaluating the operation of an alternator comprising:  
a terminal for receiving an alternator output signal representative of [an] a rectified output of the alternator;  
a frequency detection device for detecting a frequency component of the alternator output signal;  
a controller for comparing the frequency component of the alternator output signal to a threshold frequency, and generating an indication signal based a result of the comparison; and  
an indication device responsive to the content of the indication signal for indicating the operation of the alternator.
18. (Amended) A system for evaluating the operation of an alternator comprising:  
means for receiving an alternator output signal representative of [an] a rectified output of the alternator;  
means for detecting a frequency component of the alternator output signal;  
means for comparing the frequency component of the alternator output signal to a threshold frequency;  
means for generating an indication signal based the comparison result; and  
an indication device responsive to the content of the indication signal for indicating the operation of the alternator.